



THE INFLUENCE OF BILINGUALISM IN THE ACQUISITION OF THE GREEK LANGUAGE BY CHILDREN WITH DYSLEXIA

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Abstract:

The question about the extent to which the acquisition of a second language at an early age affects the literacy development of the child seems to be ambiguous and depends on multiple factors both from the internal and external environment of the child. Bilingualism seems some times to affect the knowledge of the mother tongue in children with typical development, whereas some other times not. The research area, however, about children with dyslexia is very poor. Therefore, we conducted a research in order to find out the extent to which bilingual dyslexic students struggle in acquiring the second language in the Greek first and second grade. In addition, we wanted to examine the reaction and performance of those students and their monolingual dyslexic counterparts towards a special-designed test in order to come out with results which reveal which the best way to teach those students is and in which activities the students are more participative and effective. Results showed that students with bilingualism and dyslexia in their early school years are more confident and participative in tasks which include simple vocabulary items and audiovisual material. In addition, the results are even more satisfying when there is a conjunction between the words of the languages they already know with the target language. Finally, students with dyslexia respond better in tasks with simple instructions which require oral answers and not written. They are also more confident when the teacher explains in detail every aspect of the task and follows the elicitation technique which leads the students to the correct answers.

Keywords: dyslexia, special education, bilingualism, linguistic skills

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1. Introduction

The question about the extent to which the acquisition of a second language at an early age affects the literacy development of the child seems to be ambiguous and depends on multiple factors both from the internal and external environment of the child.

Specifically, researches in Canada have shown that in literacy domains bilinguals' skills outweigh those of monolinguals (Cummins, 1978; Hakuta, 1986; Lambert & Tucker, 1972; Peal & Lambert, 1962), while Scandinavian researches prove that bilingual students and especially those who have immigrated in the early school stages, may not acquire either language accurately and fluently (Skutnabb – Kangas & Tukomaa, 1976). The reasons lying under the contradictory results of the researches concern the level of exposition of the child to each language, the sociolinguistic environment within the bilingual child is raised as well as the methods used for the assessment of the language awareness (Umbel et al., 1992).

More contemporary researches though support the opinion that bilingualism or even multilingualism prove to be significantly beneficial for the children. This is proved by recent studies which show that children learning more than one language at an early age develop mental intelligence (Brohy, 2001; Jessner, 1999), they also appear increased linguistic and metalinguistic skills and they perform better in tasks which demand attention and concentration (Bialystok, 2001). In addition, they exhibit extreme phonological awareness of the languages being taught (Andreou, 2007) along with better communication strategies and memory techniques (Griessler, 2001).

Another study under the topic of the inconspicuous bilingualism in the Greek school (Tsokolidou, 2005), supported that the transfer of knowledge from the mother tongue to the target language (Greek) could decrease the chances of a successful acquisition of the target language. That concerned the students who had developed sequential bilingualism which means that they had already developed a system of meanings and concepts in their mother tongue, something which make it difficult for them to realize and comprehend equivalent concepts in the target language. Through this study, the need of sustained effort for the development and encouragement of the mother tongue was claimed as vitally important as it is necessary for their successful educational performance. It was also supported that the acquisition of the second language depends on the effective acquisition of the first language.

In the cases of passive bilingualism, the children's awareness of their first language was limited. In 9 out of 19 studied cases, the students could write in their first language (Albanian), a positive sign for their acquisition of the first language.

As a result of the aforesaid, the degree of bilingualism whether it is active or passive, it is an integral part of the bilingual students in a Greek elementary school and it is claimed that it should be present and supported inside the classroom through practices of reinforcement of the children bilingualism. Teachers should be aware of the bilingual students' families and spoken language inside and out of the classroom.

As it is proved from other international studies (Benson, 2002), the reinforcement of students' bilingualism contributes, among others, to the better relation of the school with the students' families and societies in which these students are raised, the boosting of their self-esteem and the prevention of possible taboos towards bilingual students (Bakker, 2000).

Deponio et al (2000) carried out a study in order to explore the practice in identifying and supporting dyslexic bilinguals at several Scottish schools. The tools used for this research were questionnaires which followed a pilot study in order for the questionnaires to be verified. Fifty-three schools from one major urban education authority were contacted. Thirty-seven (70%) schools responded, all of which had bilingual pupils (26 primary schools, nine secondary schools, two special schools). Bilingual pupils comprised roughly 2% of the total school population. A thorough investigation revealed an extremely low incidence of suspected dyslexia among bilingual pupils within this authority (0.8%). A subsequent questionnaire, stage 2, was devised in order to investigate the low incidence of suspected dyslexia further. An additional question was inserted to discover how many bilingual learners were judged to have general literacy difficulties. Three hundred and fifty-one schools from nine Scottish education authorities were sent copies of the survey. One hundred and six (30%) schools responded. Ninety-one (26%) had bilingual pupils on their rolls and were used for the audit (66 primaries, 22 secondaries, three special schools, i.e. schools for children with a range of special educational needs). Bilingual pupils comprised 4% of the school population. The incidence of suspected dyslexia among bilingual pupils was very low (between 1% and 2%). Schools were asked who had first suspected dyslexia. In 52% of cases one teacher, usually the LS (learning support/support for learning) teacher, had first expressed concern. In 41% of instances, LS and EAL (English as an additional language) teachers had jointly raised concerns, with the class teacher featuring also in many of these cases. Parents and educational psychologists featured to a lesser degree (22%). Schools were asked what indicators led to the suspicion of dyslexia. The most frequently used indicators were difficulty or pronounced difficulty with reading and/or spelling, perceptual and organizational difficulties, discrepancies in performance and phonological awareness. Schools were asked to indicate what approaches were used to confirm or reject the suspicion of dyslexia. Classroom-based monitoring was undertaken by all schools, with an equal distribution of monitoring undertaken between class, LS and EAL teachers. Observation, ongoing assessment and teacher consultation were popular strategies for monitoring. Less popular strategies were parental consultation, pupil consultation and screening tests/checklists. The initial suspicion of dyslexia was confirmed in approximately 7% of cases. In approximately 15% of cases the initial suspicion was rejected, but in each case additional comments from the LS/EAL teacher indicated that there were ongoing uncertainties. A conclusion had yet to be reached in around 30% of cases, and no answers were recorded in roughly 48% of cases. According to the above data collected, Deponio et al, (2000) concluded that the lack of the learner's English language competence in literacy skills, the lack of

provision for first language assessment and the level of staff awareness of issues relating to bilingualism and dyslexia caused the greatest levels of difficulty during the assessment process. The lack of the learner's English language competence in oral skills and teachers' difficulties in gaining access to/knowledge of appropriate approaches to assessment caused problems in some cases. The results of the specific study suggest an under-representation of bilingual dyslexics. It is significant to mention that from this research it becomes obvious that there is an uncertainty surrounding regarding bilingual pupils or an unwillingness to confront it. The extensive use of observation and informal classroom assessment suggests that teachers appreciate the difficulties involved and tend to carefully monitor and observe the situation rather than immediately attempt to confirm dyslexia. Still, results showed that there is a tendency not to reach a final decision. Caution was suggested by this study when considering difficulties to avoid in the performances of bilinguals to avoid the possibility of misdiagnosing them with dyslexia (Deponio et al., 2000).

As it appears from the above study, the domain of bilingualism in conjunction with dyslexia is quite vague and both domains interact and influence separately the students' language awareness and performance.

A more relevant study carried out in Greece and concerning the screening of dyslexia in Greek language for bilingual students, (Sandravelis, 2015), revealed that phonological awareness and short term verbal memory played the most significant role in order to screen dyslexia in bilingual students, while the small screening value of visual perception was verified. This research investigated bilingual students who didn't have Greek as first language and expressed reading difficulties.

Other studies concerning the mistakes and difficulties made by dyslexic students who are taught a second language (Andreou et al., 2010) examined the ability to write a story on the computer based on pictures, where the languages examined were Greek (L1) and English (L2). According to the results, dyslexics generally made more mistakes than non-dyslexics in both languages but both dyslexics and non-dyslexics made more phonological mistakes in English than in Greek, in which most mistakes were orthographical. Andreou and Baseki (2010) mentioned that phonological mistakes are more serious than orthographical ones since they can completely change the meaning of a word or produce non-words. According to their findings, the type of mistakes in writing is completely depended on the orthographical system of a language (Greek: shallow, English: deep) as well as on the morphology of each language (Greek: rich derivational and inflectional morphology, English: poor inflectional morphology).

Andreou and Baseki (2014) also examined spelling performance in picture elicited narratives of dyslexic and non-dyslexic students in Greek (L1) and English (L2). Phonological, orthographical and morphological errors were examined along with the revising and pausing behavior of the students, as according to them, they possess essential parts of the writing process and are closely linked to spelling performance. According to their results, dyslexics made more morphological errors in Greek and more phonological errors in English.

From a more optimistic point of view, bilingualism can very often facilitate the acquisition of a second language as professor, François Grosjean, an expert on bilingualism, mentions in his interview with Forrest Sarah (2012). He claims that bilingualism enhances many abilities such as problem solving as well as the capacity to analyze different aspects of language which is a skill needed for reading and writing while he assures us that a dyslexic student can always acquire a second or a third language as a great part of the language learning can be practiced orally, a place where dyslexics feel more comfortable. Additionally, he points out the importance of actually practicing the language in order to be acquired effectively. The student's environment plays a major role in the development of the language by the student.

The false belief that bilingualism affects negatively and can prevent students from acquiring a second language effectively is confirmed through studies which support that many bilinguals can use their knowledge from the multiple language experience as a weapon to overcome their difficulties (Dulude, 2012), which is on the contrary of those who would expect that bilingual dyslexics do worse in language tests as they may get confused by the different languages which co-exist in their brain than monolingual dyslexics. In this study, Dulude (2012) concludes in explaining that proficiency in any language depends on the language system and special features, each language possesses and that the wide vocabulary that a bilingual student develops may help him in the acquisition and practice of a foreign language.

In favor of bilingualism and its benefits in language acquisition, there are studies as well, (Kovelman et al., 2016), which support that bilingualism can improve the flexibility of students' metalinguistic cognition for learning to read.

"It is therefore possible that in the case of bilingual learners of two alphabetic scripts, for both typical learners and those with dyslexia, bilingual exposure has a positive impact on children's phonological reading skills"

(Kovelman et al., 2016)

2. Methodology

The research questions include the extent to which bilingual dyslexic students struggle in acquiring the second language in the Greek first and second grade. In addition, we wanted to examine the reaction and performance of those students and their monolingual dyslexic counterparts towards a special-designed test in order to come out with results which reveal which the best way to teach those students is and in which activities the students are more participative and effective. For the statistical analysis, we used SPSS, version 20.

Correlation analysis was performed in order to find out if there is a correlation between the two scales of the test. In addition, paired t- test analysis was performed in order to find out if there is a linguistic difference between children with dyslexia and children without it.

2.1 Sampling

In order for the outcomes and results of the research to be accurate, they need to be representative of the target group we want to study. For this reason, the participants we have chosen to fulfill the process of the data collection either by the quantitative method have to represent not only themselves but the sample of the population we have researched on. In other words, the sampling refers to the selection of the portion of the specific population we study and research about (Battaglia, 2008). We have two categories of sampling each of which has its subcategories according to the target group we need to study and the way in which we will do that. On one hand, there is the probability random sampling according to which everyone in the population has the same probability and chance of being selected for the sample. The probability samples include the systematic random sample, stratified random sample, multistage sample, multiphase sample and cluster sample (Battaglia, 2008). In my research the part of the data collection which will be realized by the questionnaires filled by students of the first and second grade in order to examine the extent to which the acquisition of a foreign language has a positive or negative or no impact to the acquisition of the first language (Greek) to bilingual dyslexic students, the simple random sampling seems to meet the characteristics and features of the chosen target group. The small population of this target group in conjunction with its homogeneity makes the sampling method applicable and easy to deliver results. In addition to that, the students are readily available after we have received the approval form the supervisors and the parents.

Specifically, we needed 24 students aged 4-8 years old who attended private elementary school in Thessaloniki. Our experimental group consisted of 12 bilingual students with dyslexia, 7 of whom spoke Albanian and Greek and 5 spoke Italian and Greek. The control group consisted of 12 dyslexic students who spoke Greek as their mother tongue. In both groups, we had girls and boys.

The major concern and goal of the research is to examine the extent to which students who are both bilingual and dyslexic can succeed in learning the Greek vocabulary and whether or not bilingualism is an influential factor in this process. Along with this hypothesis we want to examine, we also need to answer further questions as to assess the teaching strategies which are considered as the most appropriate and effective for this teaching and learning procedure and to examine the reliability of the tools used to assess the proficiency level of the students' performance as far as their vocabulary acquisition is concerned.

2.2 Tool

The tool used for the collection of the data was the LATO questionnaire, a psychometric criterion of language proficiency. This psychometric criterion of language proficiency (Tzouriadou et al, 2008) is based on the theoretical approaches of Bloom and Lahey (1978), Bloom, Hood and Lightbown (1974) and Rabinowitz and Glaser (1985). According to the framework set by the above mentioned specialists the features of speech are separated in three systems which include the morphology (phonology,

morph-syntactic) and concept (meaning) of speech. The input, organization and output give us these three major systems and depict the way in which speech is used and becomes comprehensive.

Specifically, input includes actions of decoding with which the symbolic and abstract meaning are signaled. The output represents the speech system and includes actions of coding and making the speech comprehensive. Most of the linguistic actions include both of these systems. However, because of the inability of defining all of the linguistic aspects through these two systems, researchers broadened them by adding the organizational system as well. This system refers to the ability of the brain of connecting and organizing the input into categories. The ability of recalling already existing information possesses a significant role in this system and the use of organizational intermediary strategies is required.

2.4 Procedure

In order for the procedure to be developed and followed accurately and without complications, the students' parents were informed about the exact time and day that the test would take place. Their signature on the consent forms which had already been given to them was a necessary sign to continue and of course, the students took part in the assessment procedure with their willing. The owner of the institute in which the test took place was an assistant figure in the class and ensured the kids' parents for the safety of the kids, the expected duration of the test and the confidentiality of the outcomes. However, the parents who expressed the desire to be aware of the outcomes and results of their kid's test were informed and a productive discussion with them followed. The fact that the questionnaires consisted of pictures (receptive vocabulary test) and objects that most of the kids are aware of and use almost every day made the test even more interesting and did not allow the kids to feel bored or tired.

The procedure followed in this research consists of two tests:

A: Receptive Vocabulary: it consists of 20 questions which assess the receptive ability of the child as far as vocabulary items are concerned and measure the ability of the child to comprehend common words by their description. The child who is given also a picture is asked to choose one out of four concepts which is the most relevant with the meaning of the word we are describing.

Specifically, the kids were gathered in the English Institute in which I work as an English teacher and took the test in a classroom which was empty and quiet in order for the kids not to be distracted. The first test (receptive vocabulary) lasted 8-10 minutes.

I showed the kid the example from the picture book (psychometric criterion of language proficiency) and said: *"Do you see these pictures? Show me a cloth which we wear at the beach."* If the student doesn't answer or gives a wrong answer, I explain each one of the pictures saying: *"These are shoes. This is a winter cloth. This is a cloth which we wear at the beach. This is an ice-cream which we eat."* Next, I repeated the instruction: *"Show me a cloth which we wear at the beach."* When the student answers correctly, I move on to the

examination of the oral vocabulary. Every correct answer is graded as 1 and every wrong or no answer is graded as 0.

B. Oral Vocabulary: it consists of two parts which assess the ability of the child to express by using appropriate vocabulary items and they also measure the ability of the child to define common words. In the first part, which consists of 20 questions, the child is asked to come out with words which are described to him. While in the second part, which also consists of 20 questions, the child is asked to describe common words which are given by the examiner.

The oral vocabulary lasted approximately 20 minutes.

Specifically, I said *"I want to tell me a word which starts with PA and means the bird which makes the sound Pa-pa-pa"* (duck|papia). If the student gives the correct answer I move on to the following question but if the answer is wrong I explain the correct answer: *"A word which starts with PA and means the bird which makes the sound pa-pa-pa is the duck."* After explaining the instruction again, I repeat the question to the student. Every corrected answer is graded as 1 and every wrong as 0.

3. Results

From the experiment made between 12 students who were bilingual and dyslexic (experimental group) and 12 students who were dyslexic but not bilingual (control group), we found that 46, 6 % gave a correct answer in the first test which was the receptive vocabulary according to which the student had to look at some pictures of random objects and give the name of an object which was asked by me. On the other hand, the control group which consisted of 12 students who were dyslexic but not bilingual, the percentage of success was 66,6 %.

In the examination of the oral vocabulary where the student had to give the word of an object described by me, the 67, 7% of the kids with bilingualism and dyslexia gave a correct answer, while 50 %of the kids with dyslexia gave a correct answer.

Cronbach alpha analysis which was used in order to reveal potential reliability between the two tasks showed that there is an overall high reliability between the two tasks $\alpha=0.854$.

Correlation analysis proved that there were the following statistically positive correlations between oral and receptive vocabulary in dyslexic bilingual children ($r=.77$, $p<.01$). Paired t-test results showed that there were statistically significant differences in the test completed by children with dyslexia and that completed by children with dyslexia and bilingualism. [$t(23)=5.1$, $p<001$].

3.1 Discussion

From the experiment made and presented above, it is proved that in tasks as the receptive vocabulary examination, where the examiner is using the target language (Greek) a lot, in order to describe the object he wants to receive as an answer, bilingual

students' performance was not as good as the one of dyslexic students. This differentiation in the result may be explained by the fact that bilingual dyslexic students in their first academic years are not yet exposed enough to the target language and they may not comprehend whole sentences such the ones made by the examiner to describe the object. The insufficient exposition of the bilingual students to the target language may be an important obstacle for the successful acquisition of both languages as Scandinavian researches have shown (Skutnabb et al, 1976). Therefore, this means that sustained effort for extensive use and practice of the target language and the mother tongue as well has to be made in order for the bilingual students to acquire both languages successfully as Tsokalidou (2005) has mentioned and proved through the results of her research.

What is more and of great importance is the fact that when I asked students about the teaching system inside the class and whether there is special guidance by the teacher, the answer was negative which proves the lack of the expertized school staff. The equipment of the schools with expertized teaching staff is a major part for the academic development of bilingual dyslexic students and the lack of it can create obstacles in the acquisition of the target language as Deponio et al (2000) mentioned in their research where the low level of the staff awareness concerning bilingualism caused a great difficulty even in the procedure of the assessment process. However, the procedure of the second language acquisition is challenging and difficult itself and bilingual students who are in their early school years find it twice as difficult as non-bilingual students and this may be one of the reasons lying under the small percentage of successfulness in the receptive vocabulary assessment where the use of the Greek language was extensive by the examiner.

On the other hand, the high levels of the dyslexic students' performance are due to the existence of the visual part (pictures). Dyslexic students need to be shown the visual part of a lesson before move on to the auditory one (International Dyslexia Association, 2000) and this is the reason why the multisensory approach has been distinguished among others as the most preferable one for the teaching and learning procedure for the language acquisition.

In the second vocabulary assessment which consists of the oral vocabulary test according to which the student has to give the word which derives from the sounds and descriptions by the examiner, the percentage of successfulness of the bilingual dyslexic students outweighs this of the dyslexic ones. This positive result towards the performance of the bilingual students lies under the similarity of the phonological system of the languages, if we consider that there are a lot of common sound words among languages (English, Greek, Italian), such as ball|mpalla, dad|mpampa, mum|mama. The result of this experiment comes to an agreement with the researches which want the bilingual students' skills in literacy domains to be significantly better than those of monolinguals (Cummins et al., 1972).

In favor of bilingual students are other researches as well which can explain the high percentage of successfulness in the oral vocabulary assessment such as Brohy's

(2001) and Jessner's (1999), in which they claim that bilingualism or even multilingualism can prove to be beneficial for students' language development and school performance. Their studies similarly as ours prove that children learning more than one language at an early age develop mental intelligence. We also agree with Andreou (2007) in the fact that bilingual students exhibit extreme phonological awareness of the languages being taught as this was also proved from our experiment.

Bilingual students possess a wider vocabulary than monolinguals do and this facilitates their acquisition and practice of a foreign language and because of the fact that their memory techniques are also highly developed (Griessler, 2001) they have the ability to perform very well in tasks where they have to deal with sounds and words. Dulude (2012) also proves through his study the ability of bilingual students to acquire and use a foreign language effectively and explains that this is also supported by evidence which wants the bilingual students to use their multiple language experience as a weapon to overcome their difficulties as far as the acquisition of a foreign language is concerned. Therefore, a bilingual student who possesses a wide vocabulary and language experience but suffers from dyslexia can use his aforesaid skills to overcome the difficulties that dyslexia causes, something that is also proved by Kovelman et al (2016) who support that bilingualism can improve the flexibility of students' metalinguistic cognition.

From the results of our experiment, we can assume that bilingualism can seem very beneficial when students are asked to complete tasks where simple oral vocabulary is used and through extensive use of the target language and practice, they can develop their language performance effectively even they have to cope with dyslexia as well. We could also claim that bilingual students with dyslexia can manipulate their learning difficulties and cope with them more comfortably than monolingual students with dyslexia as the first are more flexible and experienced in language learning procedures. Of course, we shall not forget the fact that in order for both groups to overcome their difficulties, sustained effort and language practice with the use of proper approaches and techniques is the most important key.

4. Findings

In conjunction with other research findings, our results seem to quite representative and valid but yet there are some limitations we cannot ignore. Although the students' reaction towards the experiment was very positive and the procedure evolved with no specific difficulties or problems, our sample was rather small. This means that our results cannot be generalized and represent a big part of the population who is bilingual and dyslexic. Our sample consists of solely 4-8 years old students who live in healthy family environment with a stable and normal socioeconomic situation and have the convenience to attend private schools having tutoring support at home if needed. In addition, the percentage of bilingual dyslexic students in Thessaloniki is rather small and this was another difficulty we had to overcome. In addition, this experiment has

been made just once and the results cannot be thoroughly representative of the situation. The limited number of researches and studies made over this topic was another inconvenience for us as I had to be based on studies made abroad, where the population is bigger and the results of researches concern a wider part of the students. The difficulty of the Greek language and its phonological system made the procedure more slow than expected. Last but not least, we need to mention that the lack of expertized teachers in schools and appropriate teaching methods needed to be applied to the teaching and learning procedure with bilingual students make those students more reluctant to express and participate actively in any language task. In foreign countries where the educational system is more developed and wider appealing to the students' needs and difficulties make studies and researches easier to bring valid and representative findings.

Outcomes:

- Students with bilingualism and dyslexia in their early school years are more confident and participative in tasks which include simple vocabulary items and audiovisual material. In addition, the results are even more satisfying when there is a conjunction between the words of the languages they already know with the target language.
- Students with dyslexia respond better in tasks with simple instructions which require oral answers and not written. They are also more confident when the teacher explains in detail every aspect of the task and follows the elicitation technique which leads the students to the correct answers.

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